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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/801,319

03/16/2004

Roger S. Cannon

LE-2002-0314.02

1998

21972

7590

01/26/2005

LEXMARK INTERNATIONAL, INC.  
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LEXINGTON, KY 40550-0999

EXAMINER

CHERRY, EUNCHA P

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/801,319	<b>Applicant(s)</b> CANNON ET AL.	
	<b>Examiner</b> EUNCHA P. CHERRY	<b>Art Unit</b> 2872	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Rosmalen (US Patent No. 4,063,287) in view of Inagaki, deceased et al (US Patent No. 5,392,150).

van Rosmalen discloses a torsion oscillator scanner (Figs 6 and 7) comprising: a plate member (58) having a non-rectangular shape selected from the group of elliptical, oval, racetrack, or circular, the plate member having an upper surface, a lower surface, and a rotational axis (55), a frame disposed in a spaced apart relation to the lower surface of the plate member (69), a mount for holding the plate member adjacent the frame (see four mounts in Fig. 7), a reflective surface located on a surface of the plate member for reflecting a light beam (59), at least one magnet disposed on the plate (72), at least one coil located on the frame (61) and configured for inducing

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electromagnetic force on the at least one magnet when alternating current is applied to the at least one coil to thereby oscillate the reflective surface to a rotational angle of oscillation at an oscillation frequency to scan the light beam through a scanning pattern in at least first and second directions at the oscillation frequency (column 6, line 38-column 7, line 36).

The reflective surface of van Rosmalen is silent whether the reflective surface has an optical power or not. However, Inagaki, deceased et al discloses the reflective surface that is used in a torsion oscillator scanner having an optical power in a form of a concave mirror (see abstract). It would have been obvious to one of ordinary skill in the art to make the reflective surface of van Rosmalen to be a concave mirror having an optical power for the purpose of converging a light beam reflected off, so that the elimination of power lost can be achieved.

3. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Rosmalen in view of Inagaki, deceased et al as applied to claims 7 and 8 above, and further in view of Slater et al (US Patent No. 6,392,220 B1).

van Rosmalen in view of Inagaki, deceased et al discloses the claimed invention as set forth above except for the

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reflective surface comprises a Fresnel lens mirror, diffractive optical surfaces having reflective properties or multiple mirrors each having different reflective properties. Slater et al discloses the reflective surface that comprise a Fresnel lens mirror, diffractive optical surfaces having reflective properties or multiple mirrors each having different reflective properties (see Figs. 24a, 24B and column 33, lines 10-25). It would have been obvious to one of ordinary skill in the art to make the reflective surface of van Rosmalen in view of Inagaki, deceased et al as taught by Slater et al, for the purpose of enhancing optical performance of the torsional scanners (see Abstract).

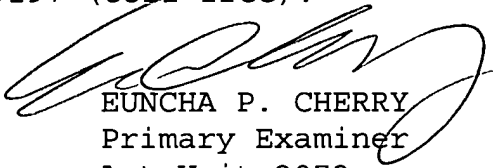
#### **Conclusion**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EUNCHA P. CHERRY whose telephone number is 571-272-2310. The examiner can normally be reached on M-F 6:30-4:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DREW DUNN can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



EUNCHA P. CHERRY  
Primary Examiner  
Art Unit 2872

1/24/05